[0011] Fig. 14 is a circuit diagram, which shows an example of an AC type static eliminator that is applied to such static elimination of a long object. In the Figure, 31 denotes a commercial power supply, 32 denotes a step-up transformer, 33 denotes a DC bias power supply, 34 denotes an electrode probe, which generates ions of positive and negative polarities in an alternating manner, and 35 denotes a film that runs in the direction of arrow A. Electrode probe 34 is set at a position at which the height H from the running surface of film 35 is approximately 50mm. L is the range of static elimination by electrode probe 34 and this is set to a length of approximately 50mm. Here, if the running speed of film 35 is v (m/s), the optimal frequency F is expressed as $F \leq (v/L)$. Thus if v = 2.5(m/s), since $F \leq (250/5)$, the optimal frequency is set to 50Hz or more.

[0012] Fig. 15 is a characteristics diagram, which shows an example of control of the secondary side voltage of step-up transformer 32 by the DC bias power supply 33. By controlling the bias voltage VB, the 0 level of the secondary side voltage changes and the amount of ions of positive or negative polarity that are generated from electrode probe 34 is thereby adjusted. An AC type static eliminator can thus perform effective static